



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,815	01/18/2002	Phillip L. Wimmer	10012053-1	3187

7590 03/10/2006

HEWETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

FULLER, ERIC B

ART UNIT	PAPER NUMBER
----------	--------------

1762

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,815

Applicant(s)

WIMMER ET AL.

Examiner

Eric B. Fuller

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-21,25,26 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-21,25,26 and 33-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 14, 2005 has been entered.

Response to Arguments

Applicant's amendments and supporting arguments have sufficiently overcome the rejections of the previous Office Action. Those rejections have been withdrawn accordingly. Applicant's arguments are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 10, 11, 18, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slysh (US 5,147,680) in view of Taylor et al. (J. Appl. Phys 64 (5)).

Slysh teaches to roughen a substrate by irradiating the surface with a laser in order to increase the adhesion of a layer to be applied (abstract). A mask may be used to control the areas on ablation (column 2, lines 15-30). The reference is silent to resettling the ablation debris.

However, Taylor teaches that by selecting the laser fluence, some of the debris is re-deposited on to the substrate. The debris then collects in areas due to electrostatic forces, function as a mask, and allow for the rcreation of conical morphology. This conical morphology increases the surface area capable for bonding between the substrate and the adhesion layer. From this, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to control the laser fluence in the process taught by Slysh such that debris resettles on to the substrate and functions as a mask. By doing so, one would reap the benefits of increased surface area for bonding.

Claims 1, 2, 10, 11, 18, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slysh (US 5,147,680) in view of Owen et al. (US 5,593,606).

Slysh teaches to roughen a substrate by irradiating the surface with a laser in order to increase the adhesion of a layer to be applied (abstract). A mask may be used to control the areas on ablation (column 2, lines 15-30). The reference is silent to resettling the ablation debris.

However, Owen teaches that by using a solid-state laser, the debris resettles and functions as a mask. This allows for more precise cuts by the laser despite fluctuations

Art Unit: 1762

in the power of the laser (column 13, lines 32-49). From this, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a solid-state laser in the process taught by Slysh such that debris resettles on to the substrate and functions as a mask. By doing so, one would reap the benefits of more precise cuts.

Claims 1-5, 7-21, 25, 26 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drazl et al. (US 6,565,927 B1) in view of Taylor et al. (J. Appl. Phys 64 (5)).

Drazl teaches to pattern a substrate by irradiating the surface with UV light in order to increase the adhesion of a layer to be applied (column 3, lines 1-25). The water, ozone, organic particles taught in column 3, lines 28-45 reads on being the initiator. The reference is silent to the optical energy being in the form of a laser.

However, Taylor teaches that by using a laser and selecting the laser fluence, some of the debris is re-deposited on to the substrate. The debris then collects in areas due to electrostatic forces, function as a mask, and allow for the recreation of conical morphology. This conical morphology increases the surface area capable for bonding between the substrate and the adhesion layer. From this, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a controlled laser in the process taught by Drazl such that debris resettles on to the substrate and functions as a mask. By doing so, one would reap the benefits of increased surface area for bonding.

Claims 1-5, 7-21, 25, 26 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drazl et al. (US 6,565,927 B1) in view of Owen et al. (US 5,593,606).

Drazl teaches to pattern a substrate by irradiating the surface with UV light in order to increase the adhesion of a layer to be applied (column 3, lines 1-25). The water, ozone, organic particles taught in column 3, lines 28-45 reads on being the initiator. The reference is silent to the optical energy being in the form of a laser.

However, Owen teaches that by using a solid-state laser, the debris resettles and functions as a mask. This allows for more precise cuts despite fluctuations in power (column 13, lines 32-49). From this, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a solid-state laser in the process taught by Drazl such that debris resettles on to the substrate and functions as a mask. By doing so, one would reap the benefits of more precise cuts.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks, can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EBF



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER